What is claimed is:

1. A method of forming a dual-layer resist, comprising the steps of:

providing a substrate;

forming a patterned first resist layer on the substrate;

curing the first resist layer so that the first resist layer does not dissolve in a resist solvent; and

forming a patterned second resist layer on the cured first resist layer.

2. The method as claimed in claim 1, wherein the step of curing the first resist layer is performed by ion implantation of argon or nitrogen into the first resist layer.

3. The method as claimed in claim 2, wherein the ion implantation is performed using an energy of 10 to 50 keV and a dose of 10^{13} to 10^{15} ions/cm^2.

4. The method as claimed in claim 1, wherein the step of curing the first resist layer is performed using argon plasma.

5. A method of coding a mask read only memory, comprising the steps of:

providing a substrate having thereon a mask read only memory array consisted of a plurality of memory cells;

forming a first resist layer having repetitive patterns to shield a partial area of each memory cell and expose the places for ion implantation;

curing the first resist layer so that the first resist layer does not dissolve in a resist solvent;

forming a patterned second resist layer on the cured first resist layer to shield a partial area of the mask read only memory array; and

performing code implantation to change the logic state of the memory cell not shielded by the second resist layer.

6. The method as claimed in claim 5, wherein the first resist layer shields a plurality of bit lines in the mask read only memory array, wherein each bit line is composed of a semiconductor doped area.

7. The method as claimed in claim 5, wherein the step of curing the first resist layer is performed by ion implantation of argon or nitrogen into the first resist layer.

8. The method as claimed in claim 5, wherein the ion implantation is performed using an energy of 10 to 50 keV and a dose of 10^{13} to 10^{15} ions/cm^2.

9. The method as claimed in claim 5, wherein the step of curing the first resist layer is performed using argon plasma.

10. A method of forming holes, comprising the steps of:

providing a substrate having a dielectric layer thereon;

forming a first resist layer having substantially parallel first trench patterns on the dielectric layer;

curing the first resist layer so that the first resist layer does not dissolve in a resist solvent;

forming a second resist layer having substantially parallel second trench patterns on the cured first resist layer, wherein the second trench patterns are substantially perpendicular to the first trench patterns; and

removing the dielectric layer under the intersections of the second trench patterns and the first trench patterns to form at least one hole.

11. The method as claimed in claim 10, wherein the step of curing the first resist layer is performed by ion implantation of argon or nitrogen into the first resist layer.

12. The method as claimed in claim 11, wherein the ion implantation is performed using an energy of 10 to 50 keV and a dose of 10^{13} to 10^{15} ions/cm^2.

13. The method as claimed in claim 10, wherein the step of curing the first resist layer is performed using argon plasma.

14. The method as claimed in claim 10, wherein the dielectric layer is mainly silicon dioxide.

15. A method of manufacturing a dual damascene structure, comprising the steps of:

providing a substrate having a dielectric layer thereon;

forming a first resist layer having a plurality of hole patterns on the dielectric layer;

curing the first resist layer so that the first resist layer does not dissolve in a resist solvent;

forming a second resist layer having a plurality of second trench patterns on the cured first resist layer;

etching the dielectric layer using the first resist layer as a mask to transfer the hole patterns to the dielectric layer; and

etching the first resist layer and the dielectric layer using the second resist layer as a mask to transfer the trench patterns to the dielectric layer.

16. The method as claimed in claim 15, wherein the two steps of transferring the hole patterns and transferring the trench patterns are performed by a same processing instrument.

17. The method as claimed in claim 15, wherein the step of curing the first resist layer is performed using ion implantation of nitrogen into the first resist layer.

18. The method as claimed in claim 17, wherein the ion implantation is performed using an energy of 10 to 50 keV and a dose of 10^{13} to 10^{15} ions/cm^2.

19. The method as claimed in claim 15, wherein the step of curing the first resist layer is performed using argon plasma.

20. The method as claimed in claim 15, wherein the dielectric layer is mainly silicon dioxide.